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COWSMILK CONTAINING VEGETABLES AND ITS PRODUCTION
[YASAI-IRI GYUNYU TO SONO SEIZO HOHO]

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[Scope of Patent Claims]

[Claim 1]

Cowsmilk containing vegetables characterized as mixing approximately 12.5 g of rapa gourd [*Brassica campestris*]; approximately 2.5 g of spinach; a total of approximately 2.5 g of *mulukkiyya*, parsley, watercress, and *shiso* [beefsteak plant]; approximately 22.5 g of lemon; and approximately 2.5 g of reduced palatinose in 150 cc of cowsmilk.

[Claim 2]

A method of producing cowsmilk containing vegetables characterized as placing approximately 12.5 g of rapa gourd [*Brassica campestris*]; approximately 2.5 g of spinach; a total of approximately 2.5 g of *mulukkiyya*, parsley, watercress, and *shiso* [beefsteak plant]; approximately 22.5 g of lemon; and approximately 2.5 g of reduced palatinose in 100 cc of cowsmilk in a mixer,

pulverizing it, and mixing it, and adding more
cowsmilk to this so that there is a total of 200 cc.

[Claim 3]

Cowsmilk containing vegetables characterized as
mixing approximately 20 g of rapa gourd [*Brassica
campestris*]; a small amount of parsley; approximately
22.5 g of lemon; and approximately 2.5 g of reduced
palatinose in approximately 150 cc of cowsmilk.

[Claim 4]

A method of producing cowsmilk containing
vegetables characterized as placing approximately 20 g
of rapa gourd [*Brassica campestris*]; a small amount of
parsley; approximately 22.5 g of lemon; and
approximately 2.5 g of reduced palatinose in 100 cc of
cowsmilk in a mixer, pulverizing and mixing it, and
adding cowsmilk to this so that it reaches 200 cc.

[Claim 5]

Cowsmilk containing vegetables characterized as
mixing approximately 15 g of carrots; approximately

22.5 g of lemon; and approximately 2 g of reduced palatinose to approximately 195 cc of cowsmilk.

[Claim 6]

A method of producing cowsmilk containing vegetables characterized as placing approximately 15 g of carrots; approximately 22.2 g of lemon; and approximately 2 g of reduced palatinose in 100 cc of cowsmilk in a mixer, pulverizing it and mixing it, straining it in a strainer twice, and then adding cowsmilk to this so that it reaches 200 cc.

[Detailed Description of the Invention]

[0001]

[Technical Field]

The present invention relates to cowsmilk containing vegetables and particularly to cowsmilk wherein vegetables whose main constituent is rapa gourd (*Brassica campestris*) are mixed with cowsmilk or cowsmilk wherein vegetables whose main constituent is carrot is mixed with cowsmilk which is effective in

treating anemia and the like as well as to a method for producing it.

[0002]

[Prior Art]

Cowsmilk contains a great many nutrients including a variety of vitamins. It has many calories and is widely consumed as it has an outstanding nutritional balance. Further, it contains many nutrients so that calcium is mixed with it. As a result, the daily requirement of calcium can be taken from the milk or there is a variety of so-called fortified cowsmilk to which vitamins and iron have been added. It is also known as a so-called mixed juice drink in which *mulukkiyya* and spinach, celery, parsley and a variety of other greenish yellow vegetables, apples, muscat grapes, grapefruit and other juices are mixed.

[0003]

[Problems Which the Present Invention is Intended to Solve]

However, although these have their own characteristics, even if they contain fortified iron and promote a hematopoietic action, merely reinforcing the amount of iron is not still not effective in treating anemia which frequently occurs in women and there is a need for cowsmilk containing constituents which are effective for these symptoms.

[0004]

As a result, it is an object of the present invention to provide cowsmilk containing vegetables which fortifies the iron content thereby enhancing the hematopoietic action, which compounds a variety of vitamins and minerals so that they are properly balanced, which is effective in anemia in women and in constipation and a variety of symptoms in women's climacteric, which uses vegetables which are widely

consumed so that it can be manufactured inexpensively and reasonably.

[0005]

[Means Used to Solve the Problems]

In order to solve the abovementioned problems, the present invention consists of cowsmilk containing vegetables by mixing approximately 12.5 g of rapa gourd (*Brassica campestris*); approximately 2.5 g of spinach; a total of approximately 2.5 g of *mulukkiyya*, parsley, watercress and *shiso*; 22.5 g of lemon; and 2.5 g of reduced palatinose to approximately 150 cc of cowsmilk. The method of producing the cowsmilk containing these vegetables involves placing approximately 12.5 g of (*Brassica campestris*); approximately 2.5 g of spinach; and a total of approximately 2.5 g of *mulukkiyya*, parsley, watercress and *shiso* in 100 cc of cowsmilk in a mixer, pulverizing and mixing them, adding to this approximately 22.5 of lemon and approximately 2.5 g of

reduced palatinose, and adding cowsmilk to this so it reaches a total of 200 cc. It also consists of cowsmilk containing vegetables made by mixing approximately 20 g of rapa gourd (*Brassica campestris*); a small amount of parsley; approximately 22.5 g of lemon; and approximately 2.5 g of reduced palatinose with approximately 150 cc of cowsmilk. It also consists of a method for producing cowsmilk containing these vegetables involving adding approximately 20 g of rapa gourd (*Brassica campestris*); a small amount of parsley; approximately 22.5 g of lemon; and approximately 2.5 g of reduced palatinose to 100 cc of cowsmilk in a mixer, pulverizing and mixing it, and adding milk to this so that it reaches 200 cc. It also consists of cowsmilk containing vegetables made by mixing approximately 15 g of carrots; approximately 22.5 g of lemon; and approximately 2 g of reduced palatinose; as well as a method of producing cowsmilk containing these vegetables which involves placing approximately 15 g

of carrots; approximately 22.5 g of lemon; and approximately 2 g of reduced palatinose in 100 cc of cowsmilk in a mixer, pulverizing and mixed these, straining it twice using a strainer, adding cowsmilk to this so that it reaches a capacity of 200 cc.

[0006]

The present invention is configured as indicated above so that it promotes the proliferative action for the blood by including rapa gourd (*Brassica campestris*) which has large amounts of iron as a natural food, which is effective in treating anemia, which also contains *mulukkiyya* and watercress so that vitamins and calcium and a variety of other minerals can be contained, which acts synergistically with the constituents in the vitamins in the cowsmilk thereby providing cowsmilk which contains vegetables. Moreover, it is rich in calcium, iron, vitamin A and vitamin C and has a variety of other effects and actions, which mixes in rapa gourd which is easy to

drink so that it acts synergistically with the
cowsmilk, thereby providing a drink having a high
nutritional value. Moreover, it has large amounts of
beta carotene which changes into vitamin A in the body
and acts synergistically with the constituents in the
cowsmilk, which utilizes the activation of the

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function of the cancer prevention and the stomach,
thereby providing a drink which is high in nutrients.

[0007]

[Mode of Working the Present Invention]

(Practical Example 1)

We mixed rapa gourd (*Brassica campestris*) and a
variety of other vegetables with the cowsmilk.

When preparing a total of 200 cc of cowsmilk
containing vegetables, the following constituent
materials in the practical examples should be used:

150 cc of cowsmilk; 12.5 g of rapa gourd (*Brassica
campestris*); 2.5 g of spinach; approximately 2

mulukkiyya leaves; small amounts of watercress, parsley and *shiso* totaling 2.5 g; 22.5 g of lemon; and 2.5 g of reduced palatinose.

[0008]

Of the abovementioned constituents, cowsmilk contains a variety of nutrients and large amounts of calories and maintains a good nutritional balance so that it used as the main constituent. Rapa gourd (*Brassica campestris*) is an annual grass of the oil and plant family and is a variety of *yuna*. It contains particularly large amounts of iron as well as large amounts of calcium. It contains other nutrients and is easy to drink. It has been reported that the rapa gourd (*Brassica campestris*) is effective in suppressing the canceration of cells. It is also effective in treating pyorrhea and is said to be effective in treating atopic dermatitis and hypertension. In traditional Asia medicine, it is said to warm the stomach, increase its function thereby

facilitating evacuation and urination. It is also said to be useful in improving sensitivity to cold and dizziness.

[0009]

Spinach is an annual and biennial plant belonging to *Chenopodioideae* family and is known to be a vegetable supplying inorganic nutrients and vitamins. It has twice the amount of vitamin C in lemons and is also rich in beta carotene and vitamin B₁ and functions to facilitate the body metabolism. It is also a vegetable which contains large amounts of iron and is effective in preventing anemia. It also contains trace amounts of zinc and the like, eliminates impairments of the taste buds and is said to promote insulin accumulation. Spinach is effective in maintaining the health of the stomach and thorax. It is also effective in stress-related hypertension and constipation in elderly persons and is said to be effective as a styptic. It also quenches thirst

brought on by diabetes due to the action of the zinc, regulates urination and promotes normalization of blood sugar.

[0010]

Mulukkiyya is an annual plant belonging to the *Corchorus* genus of the *Tiliaceae* family. It is a greenish yellow plant cultivated in the Arab tropical zone mainly in Egypt and is a type of edible plant. This plant is rich in a variety of vitamins and calcium and a variety of other minerals. Recently a great deal of it has been cultivated in Japan. When 200 cc of cowsmilk containing vegetables in the present invention is prepared, approximately two standard *mulukkiyya* leaves are used. Moreover, watercress is a perennial aquatic plant of the *Cruciferae* family having a slight saltiness and odor and is rich in calcium, iron and other minerals and vitamin A and C. Parsley is a biennial or perennial plant of the dropwort family whose leaves are used as

a food. It has a strong odor and bitterness and is rich in nutrients. For example, as much as 7500 micrograms of carotene are contained in 100 g of it. It has a bactericidal action and is used in traditional Chinese herbal medicine as an antitoxic remedy and for treatment of eczema, pimples and the like. Its distinctive odor and bitterness act on the stomach, increase peristalsis of the stomach, activate secretion of bile so that digestion is promoted and is said to function to promote the appetite and to help in recovering from fatigue.

[0011]

Shiso (beefsteak plant) is an annual plant belonging to the *Perilla* family whose sprouts, spikes and leaves contain cyanidine glycoside having an anti-allergic action. *Shiso* has been used since ancient times to treat urticaria caused by eating shellfish and meat. Its effect even on pollinosis and allergic rhinitis, atopic dermatitis and the like has been

clarified by the presence of the abovementioned glycoside. It is used in Chinese herbal medicine to treat colds and it has been found to have an action in warming the body for shisoaldehyde in refined oil constituents as well as limonene, pinene and the like. As a result, it is used to improve the functioning of the stomach and to treat stomachache and diarrhea. *Shiso* is also said to be effective in anemia and skin eruptions. These vegetables are rich in a variety of vitamins and calcium and other minerals as indicated above, they have a distinctive flavor so that they are used in small quantities.

[0012]

Lemon is an evergreen fruit-bearing plant containing large amounts of vitamin C. It is used to provide vitamin C not satisfied in the abovementioned constituents. Reduced palatinose is a sweetener and makes the cowsmilk containing vegetables in the present invention easy to drink without using sugar.

Since no sugar is mixed in to this, it is suitable for treating obesity and as a means of preventing tooth decay and can be consumed easily without having to worry about these matters. Table 1 indicates the main constituents per 100 g of the abovementioned vegetables.

[0013]

[Table 1]

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Table 1

| Constituent | A | B | C | D | E | F | G |
|---------------------------|---|---|---|---|---|---|---|
| energy kcal | | | | | | | |
| protein g | | | | | | | |
| calcium mg | | | | | | | |
| iron mg | | | | | | | |
| potassium mg | | | | | | | |
| zinc μ m | | | | | | | |
| vitamin A efficacy IU | | | | | | | |
| vitamin B ₁ mg | | | | | | | |
| vitamin B ₂ mg | | | | | | | |
| vitamin C mg | | | | | | | |
| vitamin E efficacy mg | | | | | | | |
| edible fiber g | | | | | | | |

A: rapa gourd (*Brassica campestris*); B: spinach; C: *mulukkiyya*; D: watercress; E: parsley; F: *shiso* (beefsteak plant); G: carrot
(See original for values)

[0014]

The cowsmilk containing vegetables in the present invention made up of the abovementioned materials contains the constituents indicated in Table 2 and has been corroborated in the analytical test result tables of the Japan Food Center. Furthermore, Table 1 indicates the comparative examples. "Z standard cowsmilk" is standard cowsmilk from company Z. "Y fortified cowsmilk" is commonly known as "fortified cowsmilk" from company Y with fortified calcium in standard cowsmilk. "A regulated soymilk" is commonly known as "regulated soymilk" from company A wherein the soymilk has been regulated. "B fruit juice drink" is a drink containing fruit made into a juice, from company B. "C vegetable drink" is a vegetable drink

from company C. For reference, the constituents per 190 g can are: 22 *mulukkiyya* leaves; 3 pieces of spinach; 11 g of carrot; 4 g of celery; 2 g of parsley; 2 g of cabbage; 2 g of green pepper; 2 g of green peas; a small amount of watercress; a small amount of radish; a small amount of clover leaves; 2 or 3 apples; 11 g of muscat grapes; 11 g of grapefruit; and a small amount of lemon.

[0015]

[Table 2]

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| Constituent | A | B | C | D | E | F |
|----------------------|---|---|---|---|---|---|
| energy kcal | | | | | | |
| protein g | | | | | | |
| lipid g | | | | | | |
| carbohydrate g | | | | | | |
| ash content | | | | | | |
| calcium mg | | | | | | |
| iron mg | | | | | | |
| total carotene mg | | | | | | |
| retinol μ m | | | | | | |
| vitamins mg | | | | | | |
| A IU | | | | | | |
| C mg | | | | | | |

A: The present invention; B: Z standard cowsmilk; C: Y fortified cowsmilk; D: A adjusted soymilk; E: B fruit juice drink; F: C vegetable milk

See original for values]

[0016]

When preparing the cowsmilk containing the abovementioned vegetables, we placed 12.5 g of rapa gourd (*Brassica campestris*); 2.5 g of spinach; and a total of 2.5 g of *mulukkiyya*, parsley, watercress and *shiso* in 100 cc of cowsmilk in a mixer, operated the mixer and pulverized and mixed these. To this we added 22.5 g of lemon and 2.5 g of reduced palatinose, at the same time, adding cowsmilk to make up the residual capacity so that the overall capacity was 200 cc. We stirred it again and mixed it, thereby providing the cowsmilk containing vegetables.

[0017]

(Practical Example 2)

We mixed mainly rapa gourd (*Brassica campestris*) with the cowsmilk and produced a nutritious milk drink. When preparing a total of 200 cc of cowsmilk containing vegetables, the following constituent materials in this practical example should be used: 150 cc of cowsmilk; 20 g of rapa gourd (*Brassica campestris*); a small amount of parsley; 22.5 g of lemon; and 2.5 g of reduced palatinose.

[0018]

Of the constituents indicated above, the rapa gourd (*Brassica campestris*) is rich in calcium, iron, vitamin A and vitamin C, has a variety of other effects and actions and is easy to drink. When cowsmilk is mixed with this, it acts synergistically with the cowsmilk constituents thereby providing a highly nutritious drink.

[0019]

When preparing the abovementioned cowsmilk containing vegetables, we placed 20 g of rapa gourd (*Brassica campestris*);, a small amount of parsley; 22.5 g of lemon; and 2.5 g of reduced palatinose to 100 cc of cowsmilk in a mixer, operated the mixer and pulverized and mixed these. Next, we added cowsmilk to fill the remaining capacity so that the total capacity was 200 cc and we again stirred it and mixed it.

[0020]

(Practical Example 3)

We mainly mixed carrot with the cowsmilk and obtained a healthy milk drink. 195 cc of cowsmilk; 15 g of carrots; 22.5 g of lemon; and 2 g of reduced palatinose should be used as the constituent materials in this practical example.

[0021]

Of the constituents indicated above, carrots are an annual and biennial grass belonging to the Japanese

parsley family. They contain a large amount of beta carotene which changes to vitamin A in the body. They are used to prevent cancer, to activate the function of the stomach and are also good for eye health. When cowsmilk is mixed with this, it acts synergistically with the constituents in the cowsmilk thereby providing a highly nutritious drink. It is rich in a variety of vitamins with the exception of vitamin C and contains large amounts of potassium, calcium, sulfur, phosphorus and other minerals.

[0022]

One method of preparing cowsmilk containing vegetables involves placing 15 g of carrots, approximately 22.5 g of lemon and approximately 2 g of reduced palatinose in 100 cc of cowsmilk in a mixer and pulverizing and mixing them. We strained the reduced palatinose in a strainer twice and added cowsmilk to this so that it reached a total of 200 cc.

[0023]

Furthermore, we tested the cowsmilk containing vegetables in the present invention containing the abovementioned constituents on the inventor who had been anemic for the past 20 years who had test drunk this continuously for a long period of time. As a result, the symptoms of anemia reappeared when the inventor stopped test-drinking this. He test-drank it again and there was no anemia and he remains free of anemia to the present. Moreover, after test drinking the cowsmilk containing the vegetables, not only were there no symptoms or side effects but he was regular. Now that he is 60 years old, there are no particular symptoms of climacteric and he remains symptom-free to this day. The cowsmilk containing vegetables has been proved to be effective as a drink used to prevent climacteric-related impairments.

[0024]

[Effect of Invention]

The cowsmilk containing vegetables in the present invention is made up of the abovementioned materials

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and is produced as indicated above. As a result, the iron is fortified and the hematopoietic action is enhanced. Further, the various vitamins and minerals are compounded so that there is a good balance. It is effective in anemia in women as well as constipation, climacteric impairments and other symptoms. By using vegetables which are widely available, it can be produced at low cost and easily at home merely by using an ordinary mixer. Manufacturing in factories requires very simple equipment and it can be easily manufactured.